

REMARKS

The present application provides an apparatus for treating a biological sample on microscope slides which offers advantages for clinical laboratories which need to process large numbers of biological samples in a cost effective manner. The apparatus is an integrated system which includes reservoirs or wells in a tray for reagents used for assays performed to obtain clinical information about the biological samples. The pending claims of this application are directed to the novel coverslips that are part of the integrated system.

In this response, claims 20 to 26, 44, and 45 are canceled. New claims 46 to 65 are submitted. Support for these new claims may be found in the claims as originally filed, in example 2 at pages 16-17 of the present specification at lines 28 to 6. Support is also found in the specification of application no. 09/219,443 from which the present application claims priority, including at page 3, paragraphs 1 and 2; at page 8, lines 7 to 17; at page 20, lines 8 to 16; and in the last paragraph of Example 4. Further reconsideration of the application in view of new claims 46 to 66 and the following remarks is respectfully requested.

Claim Rejections - 35 U.S.C. § 112:

In the outstanding Office Action, claims 20-26 and 44-45 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as his invention. It was asserted that the term "predetermined volume" recited in the claims was unclear. In the present response new claims directed to a multichamber coverslip are submitted. The claims do not contain the term "predetermined volume." Without taking a position on whether a volume of 10 to 20 μ l is a predetermined volume, applicant respectfully asks that this rejection, as it might be applied to new claims 46 to 66, be withdrawn.

Claim Rejections - 35 U.S.C. § 102(b) and (e):

In the outstanding Office Action Claims 20, 22-23, 25 and 44-45 were rejected under 35 U.S.C. § 102(b) as anticipated by Atwood et al., US 5,364,790. The rejection is traversed, to the extent it might apply to the newly submitted claims.

New claim 46 is directed to a multichamber coverslip comprising a group of connected coverslips which are spaced such that a single coverslip lines up with one or more slides in a slide holder of the system for processing biological samples. Claim 59 is directed to a method of processing a biological sample that uses the multichamber coverslip.

Atwood discloses an in situ PCR system for amplification of nucleic acids contained in a prepared cell or tissue sample. The containment system for the PCR sample comprises a glass microscope slide, a specimen sample containing a target nucleic acid sequence mounted on the slide, a flexible plastic over the sample and a retaining assembly fastened to the slide and the cover. Nothing in Atwood discloses the multichamber coverslip of the present application. Moreover, Atwood does not disclose a method for performing an assay on a more than one biological sample using the multichamber coverslip of the integrated system as described in the present application. Accordingly, Applicant respectfully asks that the rejection under section 102(b) be withdrawn.

Claims 20, 22-23, 25 and 44 are rejected under 35 U.S.C. 102(e) as being anticipated by Brown et al. (U.S. Patent No. 6,143,496). Applicant respectfully asks that this rejection be withdrawn as it may be applied to the claims submitted with this response.

Brown discloses methods for detecting and quantifying genomic nucleic acid molecule sequences by simultaneously amplifying a plurality of discrete nanoliter-sized samples. The method can be carried out on an apparatus that can be a microscope slide or a coverslip. Brown does not disclose an apparatus that is a multichamber coverslip comprising a group of connected coverslips, nor does it disclose a method of

assaying a biological sample using such an apparatus. Because Brown does not disclose the multichamber coverslip of the apparatus of the present invention or the method of using the multichambered coverslip, Applicant respectfully asks that the rejection based on Brown be withdrawn as it might be applied to the present claims.

Claim Rejections - 35 U.S.C. § 103(a):

Claims 21 and 26 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Atwood et al. (U.S. Patent No. 5,364,790) in view of Pan et al. (WO 97/07241). In this response claims 21 and 26 are canceled. As discussed above, Atwood does not disclose the multichamber coverslip of the present claims, nor does it describe the method for performing an assay on a biological sample using that multichamber coverslip of the present claims.

Pan is cited as teaching a method for amplification of a specific nucleic acid sequence located in a tissue section by attaching the tissue section to a support structure to form a composite, immersing the composite in a solution adapted for carrying out PCR and amplifying the sequence by PCR. It is further cited as teaching those reagents are dried on a coverslip. Nothing in Atwood taken alone or in combination with Pan discloses the multichambered coverslip of the present claims, nor does it disclose coverslips having dried reagents for use in processing and/or methods which use those cover slips. Therefore, Applicant respectfully asks that the rejection of claims 21 and 26 under 103(a) as being obvious over Atwood in view of Pan be withdrawn as it may be applied to the newly submitted claim 56.

Claim 24 was rejected under 35 U.S.C. § 103(a) as being obvious over Atwood et al., in view of Kuan et al. (U.S. Patent No. 6,181,811). In this response claim 24 is canceled and new claim 58 is submitted. As discussed above, Atwood does not disclose the multichamber coverslip of the claims submitted with this response. Kuan was cited to show the use of barcodes for identification purposes in automated systems. Nothing in Atwood taken alone or in combination with Kuan discloses or

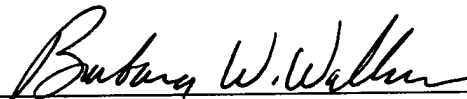
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suggests the multichamber coverslips of the present application. Accordingly, applicant asks that this rejection be withdrawn, as it may be applied to newly submitted claim 58.

Conclusion

Applicants respectfully request reconsideration of the application in view of the newly submitted claims and the accompanying remarks and ask that the outstanding rejections be withdrawn as they may be applied to the new claims.

Respectfully submitted,

By 
Barbara W. Walker
Reg. No. 35,400
Attorney for Applicants
ROTHWELL, FIGG, ERNST & MANBECK
Suite 800, 1425 K Street, N.W.
Washington, D.C. 20005
Telephone: (202)783-6040

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